RETICLE

It is possible to estimate distances with the help of the reticle. All you need is to know the approximate size of your target and the coverage dimensions of your reticle. You can easily find the latter in your reticle data sheet on our website (**www.schmidtundbender.de/en/downloads/data-sheets**).

If your riflescope has a reticle in the first focal plane, you can estimate distances using the formula below, regardless of magnification. If the reticle is in the second focal plane, the formula only applies for the reference magnification (see data sheet).

Use the following formula to estimate the distance to your target:

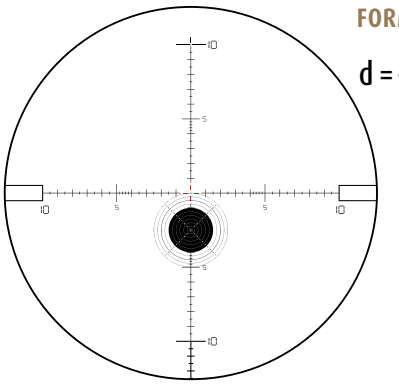
$$d = \frac{g}{a} \cdot 100\ m$$

d: Distance to be determined in m
g: Size of the target object in cm
a: Coverage of the covered structure of the reticle in cm

THESE EXAMPLES CAN HELP YOU TO BETTER UNDERSTAND THE ISSUE:

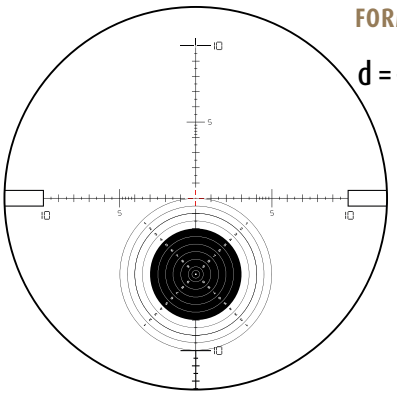
EXAMPLE FOR COMPETITION SHOOTERS

A large calibre target (ISSF) with a diameter of approx. 100 cm [g] is used in competition for example, viewed using a P5FL reticle in the first focal plane. The unit of this reticle is mrad (1 mrad = 10 cm at 100 m). If the large-calibre target now covers the area between the centre of the reticle and the 5 mrad mark, this corresponds to a coverage of 50 cm [a] at 100 m. This results in an estimated distance of 200 m [d] according to the above formula. If the large calibre target covers the area between the reticle centre and the 10 mrad mark, the coverage is 100 cm [a] at 100 m, giving a distance of 100 m [d].



FORMULA 200 M:

$$d = \frac{100\ cm}{50\ cm} \cdot 100\ m = 200\ m$$



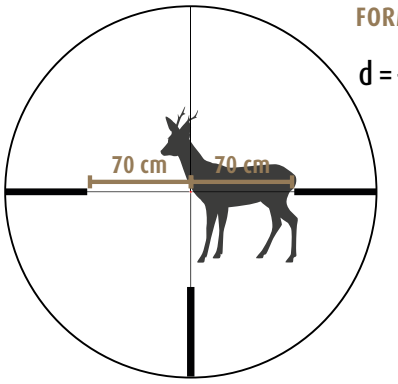
FORMULA 100 M:

$$d = \frac{100\ cm}{100\ cm} \cdot 100\ m = 100\ m$$

EXAMPLE FOR HUNTERS

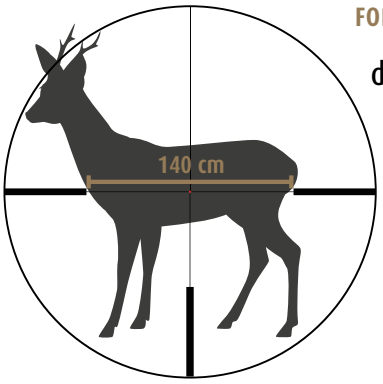
The hunting example is a roebuck (≙ 70 cm [g], Fig. left), which is viewed by means of an LP7 reticle in the second focal plane. At the true magnification (e.g. 3-18x42: 9x), the coverage of the distance between the two horizontal bars in the reticle is 140 cm per 100 m. If the roebuck now covers the area between the centre of the reticle and a horizontal bar, this corresponds to a coverage of 70 cm per 100 m [a]. This gives an estimated distance of 100 m [d] according to the above formula. If the roebuck covers the area between the two horizontal beams, the coverage is 140 cm per 100 m [a], resulting in a distance of 50 m ([d], fig. right).

However, if the roebuck is viewed at 18x magnification, the distances must be multiplied by a factor of 2 [d*2] due to the double magnification.



FORMULA 100 M:

$$d = \frac{70\ cm}{70\ cm} \cdot 100\ m = 100\ m$$



FORMULA 50 M:

$$d = \frac{70\ cm}{140\ cm} \cdot 100\ m = 50\ m$$